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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,874	03/30/2004	Tomoaki Toratani	5319-8DIV	8078
27799	7590	12/29/2004	EXAMINER	
COHEN, PONTANI, LIEBERMAN & PAVANE 551 FIFTH AVENUE SUITE 1210 NEW YORK, NY 10176			ELLINGTON, ALANDRA	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/814,874

Applicant(s)

TORATANI ET AL.

Examiner

Alandra Ellington

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-8, 10-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 9 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/30/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Objections***

1. Claims 6-10 are objected to because of the following informalities:

a. With respect to claim 6, replace "fist" with --first-- (line 5).

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11-13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Horner et al (4,757,721)(hereinafter Horner).

a. With respect to claim 11, Horner discloses a slip ring 20,58 with a metal ring 58 having conductivity; and a film 24 formed on said metal ring 58, said film 24 being made of a synthetic resin having conductivity (col. 1 lines 54-68, col. 3 lines 12-53).

b. With respect to claim 12, Horner discloses the slip ring according to claim 11, wherein said film 24 is formed only on a part of said metal ring 20,58 (col. 1 lines 54-56, col. 3 lines 12-22,49-53).

c. With respect to claim 13, Horner discloses the slip ring according to claim 12, wherein said shaft 2 has a neutral position; and said metal ring 20,58

contacts said brush 22 through said film 24 when said shaft 2 is in said neutral position (col. 49-61 {Fig. 1}).

d. With respect to claim 15, Horner discloses the slip ring according to claim 11, wherein said synthetic resin having conductivity is a mixture including an epoxy resin and at least carbon as conductive material (col. 1 lines 30-68, col. 3 lines 1-22,49-55).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Filaretos (6,368,886) in view of Horner (4,757,721).

a. With respect to claim 6, Filaretos discloses a rotating assembly with first and second members surrounding a shaft 28,29, being disposed separate from each other along an axis 30 of the shaft, and relatively rotating along with the rotation of the shaft 28,29; a slip ring 18 carried on a first member and extending concentrically with the shaft 28,29, the slip ring 18 being made of conductive metal; a conductive brush 26,46,48 carried on the second member and slidably contacting the slip ring 18 wherein a sliding-contact position between the brush 26,46,48,66,68,70,72 and the slip ring 18 is displaced in a circumferential direction of the slip ring 18 according to the rotation angle of the shaft 28,29

when the first and second members relatively rotate (col. 4 lines 10-24,33-42, col. 5 lines 14-33,66-67, col. 6 lines 1-28, col. 7 lines 36-47, col. 8 lines 41-67).

However, Filaretos does not teach a synthetic resin film having conductivity.

Horner teaches a slip ring 20,58 made of a synthetic resin film 24 having conductivity (col. 1 lines 30-68, col. 3 lines 1-22,49-55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Filaretos with the teachings of Horner to include a slip ring made of synthetic resin film having conductivity for the purpose of achieving good electrical contact with the slip ring at a relatively low tension (see Horner, col. 1 lines 30-68, col. 3 lines 1-22,49-55).

b. With respect to claim 7, Horner teaches the film 24 formed on only a part of the slip ring 20,58 (col. 1 lines 54-56, col. 3 lines 12-22,49-53).

c. With respect to claim 8, Horner teaches the slip ring 20,58 contacting the brush 22 through the film 24 when the shaft 2 is in the neutral position (col. 49-61 {Fig. 1}).

d. With respect to claim 10, Horner teaches a slip ring 20,58 made of a synthetic resin having a mixture including an epoxy resin and at least one carbon as a conductive material (col. 1 lines 30-68, col. 3 lines 1-22,49-55).

***Allowable Subject Matter***

6. Claims 9 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The reason for the indication of allowable subject matter is based on the inclusion of the *slip ring having a commonly used zone in which there exists a sliding-contact position with high frequency and a non-commonly used zone in which there exists a sliding-contact position with lower frequency than the commonly used zone; and a film is formed on the commonly used zone of the slip ring.*

**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(4,922,761) (4,656,409) (6,427,307) (4,418,348) (3,921,340)

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alandra Ellington whose telephone number is (571) 272-2178. The examiner can normally be reached on Monday - Friday, 7:30am - 4:00pm.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Art Unit: 2855

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alandra Ellington  
Art Unit 2855



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